US-PAT-NO: **6282243**

DOCUMENT-IDENTIFIER: US 6282243 B1

TITLE: Apparatus and method
for interframe predictive video
                              coding and decoding
with capabilities to avoid rounding
                              error accumulation

---------- KWIC ---------

US Patent No. - PN (1):
   6282243

Detailed Description Text - DETX (15):
     The frame memory 109 also receives
motion vector information from the motion
estimation unit 101, which information
serves as an offset address when the
memory contents are read out. The frame
memory 109 outputs displaced picture
data relevant to a given motion vector.
The prediction picture calculation
unit 110 produces a prediction picture from
the picture data supplied from the
frame memory 109. In this picture
prediction process, pel values on the
half-pel grids are calculated from the

values of adjacent pels by
interpolation. The interpolation process
supports two types of rounding
algorithms that **round up or down** each
interpolated pel value to an appropriate
integer value. A calculation controller
111 determines which algorithm (i.e.,
round up or round down) to use in the
prediction picture calculation unit 110,
on the basis of the motion vector supplied
from the motion estimation unit 101
in conjunction with other control signals
available. The full details of the
prediction picture calculation unit 110 and
calculation controller 111 will be
separately explained later on.

Detailed Description Text - DETX (17):
    The frame memory 205 outputs picture
data relevant to the motion vector
given by the variable-length decoding unit
201. The prediction picture
calculation unit 206 generates a prediction
picture from the picture data
supplied from the frame memory 205 by
performing interpolation and appropriate
rounding operations. A calculation
controller 207 controls which algorithm
(i.e., **round-up or round-down**) to use in
the prediction picture calculation
unit 206, on the basis of the motion vector
provided from the variable-length
decoding unit 201 and other control
signals.

US-PAT-NO: 6470048

DOCUMENT-
IDENTIFIER: US 6470048 B1

TITLE: Frequency-based video data substitution for increased video compression
                              ratios

Abstract Text - ABTX (1):

  Frequency information is selectively removed from a video signal in order to decrease the number of
color values required for video compression. Removal of the frequency information includes both
periodic raking out of narrow frequency bands, and rounding of frequency values. The frequency
information removal is carried out selectively in those portions of the visible light spectrum in which the
human eye's color response is strongest, thus allowing increases in video compression ratios without
visible degradation of image quality.